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PRIME HOOK NATIONAL WILDLIFE REFUGE

Milton, Delaware

ANNUAL FIRE MANAGEMENT PROGRAM FY 87

Submitted By:

Carol D. Daly  
Refuge Manager

Date: 9-25-86

Reviewed By :

Peter S. Smith  
Regional Fire Mgmt Council

Date: 12/29/86

Approved By:

Edward S. Morse  
Refuge Supervisor-South

Date: 12/29/86

FY 87 ANNUAL FIRE MANAGEMENT PROGRAM  
PRIME HOOK NATIONAL WILDLIFE REFUGE

A. Area Identification

If habitat conditions permit, prescribed burning will be used for management in six areas totaling 1530 acres:

- Area 1. 625 acres of Phragmites, salt marsh grasses (predominately Spartina patens and Distichlis spicata), switchgrass and brush (high tidebush and myrtle). The area is bounded on the north by County Road (CR) 224, the east by the Refuge boundary and sand dunes, the south by CR 199 and the west by Slaughter Canal and Area 2. The desired result - remove standing canes of Phragmites and accumulated litter; kill or stress brush species encroaching on upland grasslands and marsh grasses; and remove litter in brush.
- Area 2. 270 acres of Phragmites, brush, salt marsh grasses and switchgrass. The area is bounded on the north by CR 224, the east by Slaughter Canal, the south by Draper-Bennett Tax Ditch and the west by the Refuge boundary and private agricultural lands. The desired result - remove accumulated fuels and standing Phragmites canes; kill or stress woody vegetation encroaching on salt marsh; and kill or stress brush species (myrtle) to set back succession and maintain edge habitat.
- Area 3. 250 acres of switchgrass and brush. The area is bounded on the north by Draper-Bennett Tax Ditch and Area 2, the east by Slaughter Canal and Area 1, the south by CR 199 and Field 111 and the west by the Refuge boundary and private agricultural lands. The desired result is grasslands management - remove accumulated litter in switchgrass; kill or stress brush encroaching on switchgrasses and marsh grasses; and remove accumulated litter in dense brush.
- Area 6. 60 acres of brush and undergrowth and grasses. The area is edge and understory of woodlands. It is bounded on the north by wetlands and croplands, the east by croplands and marsh, the south by the Refuge boundary and the west by upland croplands. The desired results - remove litter, brush etc. from understory to maintain clearings for Delmarva Fox Squirrels.
- Area 7. 125 acres of switchgrass, marsh grasses and brush. The area is bounded on the north and east by marsh, the south by CR 16 and the west by upland croplands. The desired results - remove accumulation fuels and dead canes of Phragmites; and kill or stress brush species encroaching on salt marsh.

Area 9. 200 acres of marsh grasses, brush, switchgrass and Phragmites. The area is bounded on the north by CR 16, the east by wetlands, the south by the Broadkill River and the west by Petersfield Ditch. The desired results - remove accumulated fuels; kill or stress brush encroaching on both marsh and upland grasses; and remove dead canes and duff of Phragmites. Phragmites stalks should be burnt off at ground level.

#### B. Burning Plan

Area 1. No firebreaks will be necessary here as both units will be burned at the same time. The burn will be conducted in March by personnel of the Memorial Fire Department, Inc., Slaughter Beach, Delaware - a volunteer company, with refuge personnel standing by. The drip torches will be used for ignition. A minimum of 15 men and three pumper trucks will be required. The Memorial Fire Department has obtained permission from private landowners adjacent to the refuge to burn brush and Phragmites on their property at the same time as the refuge burn is accomplished.

Cost - 3 man days of refuge staff. Estimate \$450 charged to 1260-225-00.

Ignition - Winds should be northeast or southeast. Given northeast winds, burnout will be along CR 224, while a southeast wind will require a burnout along CR 199. The main fire in Area 1 will be a head fire ignited along the eastern boundary of the refuge. For Area 2, the main fire will be set along the western boundary of the refuge and will backburn to Slaughter Canal.

Holding/Control will be obtained by burning out the perimeter of the burn area and allowing the fire to burn into the interior of the refuge. On the western side of Area 2, the burn will backburn into the interior of the refuge. County roads on the north and south of the burn area, Slaughter Canal in the center and backburns along the eastern and western boundaries will control (contain) the burn.

Mop up - Once the fire has burned into the interior of the refuge, it will offer few problems. Burning snags will be removed by refuge personnel, and refuge personnel will monitor the burn until all smoldering has stopped. Past burns have indicated that this occurs within 24 hours.

Area 3. The purpose of this burn will be to favor switchgrass, a warm season grass. The burn will be conducted in late April by the Memorial Fire Department or refuge personnel. Firebreaks have been mowed in selected blocks to help contain the burn. No

other firebreaks will be necessary. One truck and 2-5 firemen will be needed. If the burn is conducted by refuge personnel three staff members and the pumper will be required.

Cost - 2 man days of refuge staff. Estimate \$300 charged to 1260-225-00.

Ignition - Winds must be southwest, 5-10 mph. Ignition will be along CR 199 at Slaughter Canal and along CR 199 to Gum Woods. At Gum Woods firing will be along the edges of woods and croplands.

Holding/Control - Areas 1 and 2 to the north and east of Area 3 will be burned in March. These areas will contain the fire as will CR 199 and Slaughter Canal.

Mop up - Refuge personnel will standby until the fire is out - an estimated four hours. Any burning snags will be felled and extinguished.

- Area 6. The purpose of this burn is to maintain clearings for Delmarva Fox Squirrels. Prior to burning, the firebreak along the southern boundary of the refuge should be maintained and any standing snags should be felled. Burning will occur in February - April. Refuge personnel will conduct the burn.

Cost - 3 man days. Estimate \$450 charged to 1260-225-00.

Ignition - Wind speed should not exceed 10 mph. Desired winds should be southwest, south or southeast to take smoke away from adjacent houses. A drip torch will be used for ignition. Burnout along the northern portion of area then fire along the southern boundary.

Holding/Control - This will be obtained by burning the perimeter of the burn area and allowing the fire to burn into the interior. The burnout along the northern portion of the area, the firebreak on the southern boundary and burning of the perimeter will contain the fire.

Mop up - Burning snags will be felled and extinguished by refuge personnel. The burn will also be monitored by refuge personnel until all smoldering has stopped. This should occur within 24 hours.

- Area 7. This area will be burned by refuge personnel in February - April. Firebreaks will not be necessary. Fire will be contained by agricultural lands, major tidal ditches and CR 16. Burning here will seek to remove dead Phragmites canes to permit sunlight to reach the marsh floor. The area has previously been treated with Rodeo to control Phragmites.

Cost - 2 man days. Estimate \$300 charged to 1260-225-00.

Ignition - The marsh water level should be drawn down to dry the soils and duff. Wind speed should not exceed 10 mph to provide a good burn. Wind direction should be from the south-east. A drip torch will be used to ignite the burn out along CR 16 first then burn out along Petersfield Ditch. Finally, burn along the edge of agricultural fields.

Holding/Control - The area is bounded by marsh on the north and east, the south by CR 16 and the west by upland croplands. These areas will serve as firebreaks and will contain the fire.

Mop up - Refuge personnel will standby until the fire is out - an estimated four hours.

Area 9. This area will be burned by refuge personnel in February or March. Firebreaks will not be necessary. The fire will be contained by CR 16, tidal ditches and the Broadkill River. Burning here will seek to remove dead Phragmites canes to permit sunlight to reach the marsh floor.

Cost - 4 man days. Estimated \$600 charged to 1260-225-00.

Ignition - Winds should not exceed 10 mph. Wind direction should be southeast or south to keep smoke from drifting across CR 16. Marsh water levels should be low. A backfire will be ignited along CR 16 by refuge personnel using drip torches. Four refuge personnel will be present. Firing will also be along the Island Farm Road and Petersfield Ditch.

Holding/Control - The tidal ditches, Broadkill River, upland croplands and CR 16 will contain the fire.

Mop up - Refuge personnel will monitor the fire until it has burned itself out. Any snags will be felled and extinguished.

#### C. Emergency Pre-Suppression

Firebreaks will be mowed in the marsh west of the Prime Hook and Slaughter Beach Developments in November - December using the refuge's tracked rotary mower. Three firebreaks each approximately 100 feet in width will be required:

- 1). South of Prime Hook Beach Road - 1,200 feet
- 2). North of Prime Hook Beach Road - 2,300 feet
- 3). South of Slaughter Beach Road - 4,000 feet

Total 7,500 feet ( $\pm$  17 acres)

A total of 12 man days will be required. Total estimated costs, including manpower, fuel etc. is \$3,000 charged to 1510-241.

D. Summary

Prescribed burns:

<u>Area</u>	<u>Cost</u>	<u>Man Days</u>	<u>Activity</u>	<u>Equipment Needed</u>
1	\$ 225	1.5	1260	Drip Torch (2)
2	225	1.5	1260	Drip Torch (2)
3	300	2.0	1260	Drip Torch (2)
6	450	3.0	1260	Drip Torch (2)
				Pumper
7	300	2.0	1260	Drip Torch (2)
				Pumper
9	600	4.0	1260	Drip Torch (2)
				Pumper

Emergency Pre-Suppression

\$3,000	12.0	1510	Marsh Tractor
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# PRIME HOOK NATIONAL WILDLIFE REFUGE

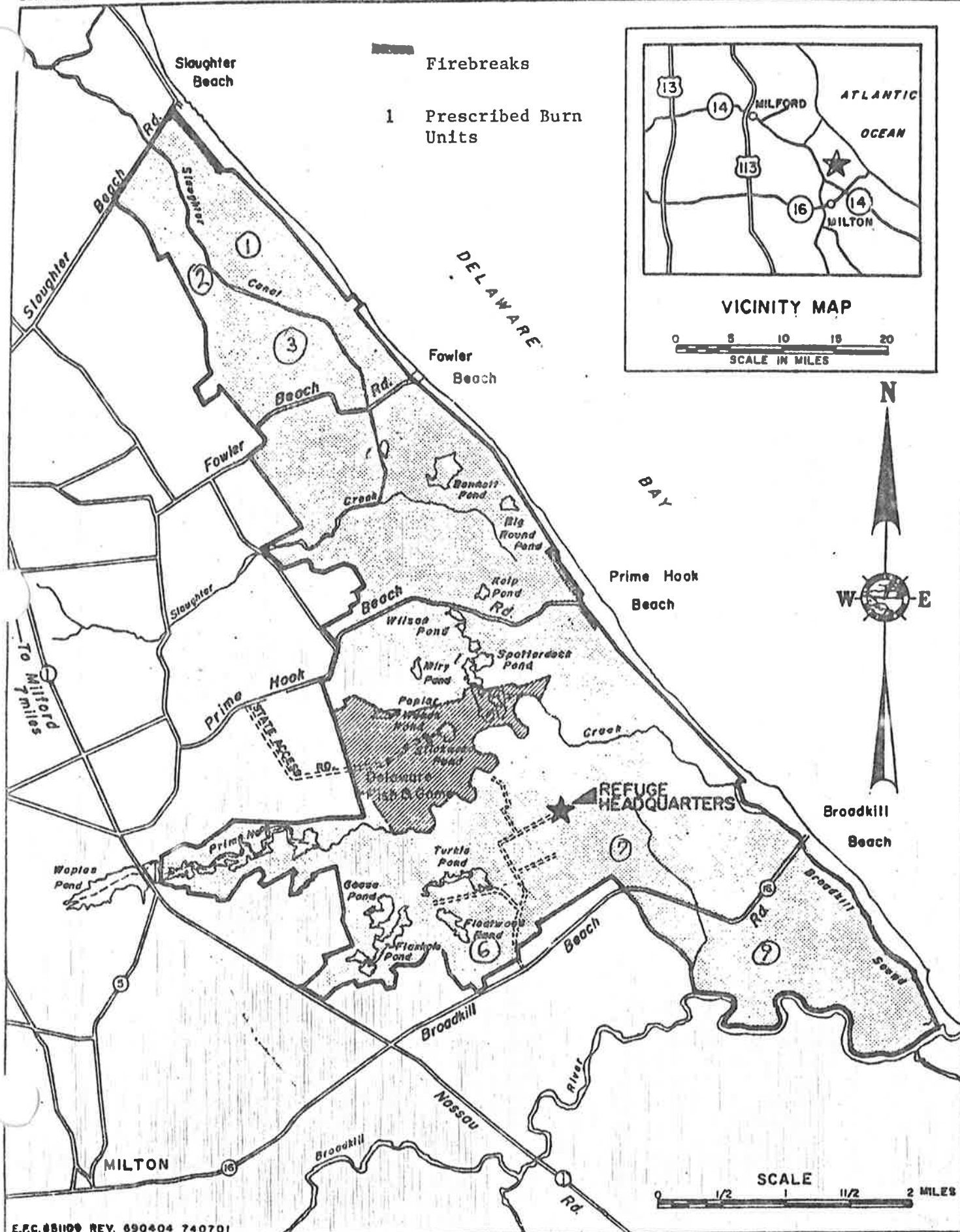
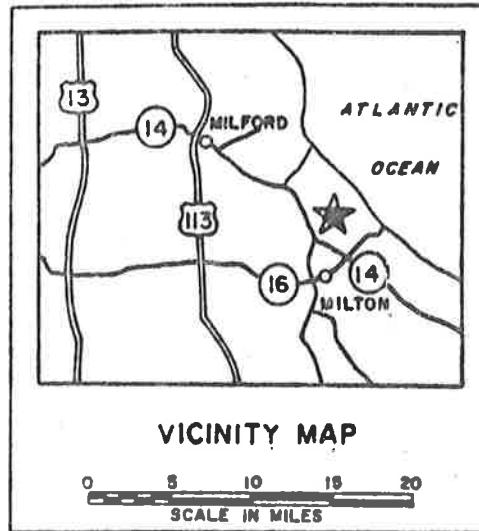
## SUSSEX COUNTY, DELAWARE

UNITED STATES  
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE

Firebreaks

1 Prescribed Burn Units



SCALE  
0 1/2 1 1 1/2 2 MILES